

**APPENDIX C****Conversion Charts****TEMPERATURE**

$$C = \frac{5}{9}(F - 32)$$

$$F = \frac{9}{5}(C + 32)$$

**AREA**

To Convert	To	Multiply By
<b>Acres</b>	Square Feet.....	43,560
	Square Yards.....	4,840
	Square Miles.....	0.0015625
	Square Meter.....	4,046.873
	Hectares.....	0.4046873
<b>Hectares</b>	Square Yards.....	11,959.85
	Acres.....	2.47104
	Square Miles.....	0.003861
	Square Meters.....	10,000
	Square Kilometers.....	0.01
	Square Feet.....	107,600
<b>Square Centimeters</b>	Square Feet.....	0.001076
	Square Inches.....	0.1550
	Square Meters.....	0.0001
	Square Miles.....	$3.861 \times 10^{-11}$
	Square Millimeters.....	100
	Square Yards.....	0.000196
<b>Square Feet</b>	Acres.....	0.0000296
	Square Centimeters.....	929.0
	Square Meters.....	0.09290
	Square Inches.....	144.0
	Square Yards.....	0.11111
	Square Miles.....	$3.587 \times 10^{-8}$
	Square Millimeters.....	$9.29 \times 10^4$
<b>Square Inches</b>	Square Centimeters.....	6.452
	Square Feet.....	0.6944
	Square Millimeters.....	645.2
	Square Yards.....	0.000716
<b>Square Kilometers</b>	Acres.....	247.1

**FM 10-416**Square Centimeters..... $10^{10}$ **AREA (Continued)**

To Convert	To	Multiply By
Square Meters	Square Feet.....	$10.76 \times 10^6$
	Square Inches.....	$1.550 \times 10^9$
	Square Meters.....	$10^6$
	Square Miles.....	0.3861
	Square Yards.....	$1.196 \times 10^6$
Square Miles	Acres.....	0.0002471
	Square Centimeters.....	10,000
	Square Feet.....	10.76
	Square Inches.....	1,550
	Square Miles.....	$3.861 \times 10^{-7}$
	Square Millimeters.....	$10^6$
	Square Yards.....	1.196
Square Yards	Acres.....	640.00
	Square Feet.....	$27.88 \times 10^6$
	Square Kilometers.....	2.590
	Square Meters.....	$2.590 \times 10^6$
	Square Yards.....	$3.098 \times 10^6$
Square Yards	Acres.....	0.0002066
	Square Centimeters.....	8,361
	Square Feet.....	9.0
	Square Inches.....	1,296
	Square Meters.....	0.8361
	Square Miles.....	$3.228 \times 10^{-7}$
	Square Millimeters.....	$8.361 \times 10^5$

**FLOW**

To Convert	To	Multiply By
Barrels per Day	Gallons per hour.....	1.75
	Gallons per minute.....	0.0292
Barrels per Hour	Cubic Feet per Minute.....	0.0936
	Gallons per Minute.....	0.7
Gallons per Hour	Cubic Feet per Hour.....	0.1337
	Cubic Feet per Minute.....	0.002228
	Gallons per Minute.....	0.016667

**FLOW (Continued)**

<b>To Convert</b>	<b>To</b>	<b>Multiply By</b>
<b>Gallons per Minute</b>	Barrels per Day.....	34.2857
	Barrels per Hour.....	1.4286
	Barrels per Minute.....	0.02381
	Cubic Feet per Day.....	192.50
	Cubic Feet per Minute.....	0.1337
	Gallons per Day.....	1,440.0
	Liters per Second.....	0.6308
	Cubic Feet per Second.....	0.002228
<b>Cubic Feet per Minute</b>	Gallons per Second.....	0.1247
	Liters per Second.....	0.4720
	Cubic Centimeters per Second.....	472.0
<b>Cubic Feet per Second</b>	Million Gallons per Day.....	0.646317
	Gallons per Minute.....	448.831
<b>Cubic Yards per Minute</b>	Cubic Feet per Second.....	0.45
	Gallons per Second.....	3.367
	Liters per Second.....	12.74
<b>Liters per Minute</b>	Cubic Feet per Second.....	0.0005886
	Gallons per Second.....	0.004403

**LENGTH**

<b>To Convert</b>	<b>To</b>	<b>Multiply By</b>
<b>Centimeters</b>	Feet.....	0.03281
	Inches.....	0.3937
	Kilometers.....	$1 \times 10^{-5}$
	Meters.....	0.01
	Miles.....	$6.214 \times 10^{-6}$
	Millimeters.....	10.0
	Mils.....	393.7
	Yards.....	0.01094
	Microns.....	10,000
<b>Feet</b>	Centimeters.....	30.48
	Kilometers.....	0.0003048
	Meters.....	0.3048
	Miles (Nautical).....	0.0001645
	Miles (Statute).....	0.0001894

	Millimeters.....	304.8
<b>LENGTH (Continued)</b>		
<b>To Convert</b>	<b>To</b>	<b>Multiply By</b>
	Mils.....	12,000
	Microns.....	.30,480
<b>Kilometers</b>	Centimeters.....	$1 \times 10^5$
	Feet.....	3,281
	Inches.....	39,370
	Meters.....	1,000
	Miles.....	.6214
	Millimeters.....	$10^6$
	Yards.....	1,094
<b>League</b>	Miles.....	3
<b>Meters</b>	Centimeters.....	100
	Feet.....	3.281
	Inches.....	39.37
	Kilometers.....	0.001
	Miles (Nautical).....	0.0005396
	Miles (Statute).....	0.0006214
	Millimeters.....	1.094
	Microns.....	$1 \times 10^6$
<b>Miles (Nautical)</b>	Feet.....	6,080.27
	Kilometers.....	1.853
	Meters.....	1,853.0
	Miles (Statute).....	1.1516
	Yards.....	2,027
<b>Miles (Statute)</b>	Centimeters.....	$1.609 \times 10^5$
	Feet.....	5,280
	Inches.....	63,360
	Kilometers.....	1.609
	Meters.....	1,609.0
	Miles (Nautical).....	0.8684
	Yards.....	1,760
<b>Millimeters</b>	Centimeters.....	0.1
	Feet.....	0.003281
	Inches.....	0.03937
	Kilometers.....	$10^{-6}$
	Meters.....	0.001
	Miles.....	$6.214 \times 10^{-7}$
	Mils.....	39.37
	Yards.....	0.001094

**LENGTH (Continued)**

To Convert	To	Multiply By
<b>Microns</b>	Microns.....	1,000
	Centimeters.....	$1 \times 10^{-4}$
	Inches.....	$3.937 \times 10^{-5}$
	Meters.....	$1 \times 10^{-6}$
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<b>Yards (US)</b>	Centimeters.....	91.4402
	Fathoms.....	0.03
	Feet.....	3
	Inches.....	36
	Meters.....	0.9144
	Miles.....	$5.68182 \times 10^{-4}$
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**VOLUME**

To Convert	To	Multiply By
<b>Barrels (US)</b>	US Gallons.....	42
	Cubic Inches.....	9,702
	Cubic Feet.....	5.6146
	Imperial Gallons.....	34.9726
	Liters.....	158.984
	Cubic Meters.....	0.15899
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<b>Cubic Centimeters</b>	Cubic Feet.....	$3.531 \times 10^{-5}$
	Cubic Inches.....	0.06102
	Cubic Meters.....	$10^{-6}$
	Cubic Yards.....	$1,308 \times 10^{-6}$
	Gallons (US Liquid).....	0.0002642
	Liters.....	0.001
	Pints (US Liquid).....	0.002113
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<b>Cubic Feet</b>	Cubic Centimeters.....	28,320.00
	Cubic Inches.....	1,728.00
	Cubic Meters.....	0.02832
	Cubic Yards.....	0.03704
	Gallons (US Liquid).....	7.48052
	Liters.....	28.32
	Pints (US Liquid).....	59.84
	Quarts (US Liquid).....	29.92
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<b>Cubic Inches</b>	Cubic Centimeters.....	16.39
	Cubic Feet.....	$5.787 \times 10^{-4}$
	Cubic Meters.....	0.02832
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Cubic Yards..... $2.143 \times 10^5$ **VOLUME (Continued)**

To Convert	To	Multiply By
	Cubic Gallons.....	0.004329
	Liters.....	0.01639
	Mil Feet.....	$1.061 \times 10^5$
	Pints (US Liquid).....	0.03463
	Quarts (US Liquid).....	0.01732
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<b>Cubic Meters</b>	Bushels (dry).....	28.38
	Cubic Centimeters.....	$1 \times 10^6$
	Cubic Feet.....	35.31
	Cubic Inches.....	61.023
	Cubic Yards.....	1.308
	Gallons (US Liquid).....	264.2
	Liters.....	1,000
	Pints (US Liquid).....	2,113.0
	Quarts (US Liquid).....	1,057.0
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<b>Cubic Yards</b>	Cubic Centimeters.....	$7.646 \times 10^5$
	Cubic Feet.....	27.0
	Cubic Inches.....	46,656
	Cubic Meters.....	0.7646
	Cubic Gallons.....	202.0
	Liters.....	764.6
	Pints (US Liquid).....	1,615.9
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<b>Gallons (Imperial)</b>	Quarts (US Liquid).....	807.9
	Cubic Inches.....	277.42
	Cubic Feet.....	0.160544
	US Gallons.....	1.20094
	US Barrels.....	0.028594
	Liters.....	4.54596
	Cubic Meters.....	0.004546
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<b>Gallons (US)</b>	Cubic Centimeters.....	3,785.0
	Cubic Feet.....	0.1337
	Cubic Inches.....	.231.0
	Cubic Meters.....	0.003785
	Cubic Yards.....	0.004951
	Liters.....	3.785
	Pints.....	8.0
	Quarts.....	4.0
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<b>Gills</b>	Liters.....	0.1183
	Pints (Liquid).....	0.25

**VOLUME (Continued)**

To Convert	To	Multiply By
Liters	Bushels (US Dry).....	0.02838
	Cubic Centimeters.....	1,000.0
	Cubic Feet.....	0.03531
	Cubic Inches.....	61.02
	Cubic Meters.....	0.001
	Cubic Yards.....	0.001308
	Gallons (US Liquid).....	0.2642
	Pints (US Liquid).....	2.113
	Quarts (US Liquid).....	1.057

**FORCE**

To Convert	To	Multiply By
Pounds per Square Inch	Kilograms per Square Inch.....	703.06687
	Inch of Mercury.....	2.036009
	Feet of Water.....	2.306009
	Atmospheres.....	0.0680457
	Kilograms per Square Centimeter.....	0.7036
KGs per Square Meter	Pounds per Square Inch.....	0.00142234
	Pounds per Square Foot.....	0.2048169
	Inch of Mercury.....	0.0028959
	Feet of Water.....	0.003280833

**WEIGHT**

To Convert	To	Multiply By
Pounds	Grams.....	453.9
	Kilograms.....	453.9
	Ounces (Avoirdupois).....	16
	Ounces (Troy).....	14.5833
	Long Tons.....	$4.4643 \times 10^{-4}$
	Short Tons.....	$5 \times 10^{-4}$
Short Tons	Kilograms.....	907.185
	Long Tons.....	0.892857
	Metric Tons.....	0.907185
	Pounds.....	2,000
Kilograms	Pounds.....	2.20462
	Short Tons.....	0.0011023
	Metric Tons.....	0.001

**FM 10-416**Long Tons..... $9.842 \times 10^{-4}$ 

<b>WEIGHT (Continued)</b>		
<b>To Convert</b>	<b>To</b>	<b>Multiply By</b>
<b>Long Tons</b>	Kilogram.....	1,016.05
	Metric Tons.....	1.01605
	Pounds.....	2,240
	Short Tons.....	1.12
<b>Metric Tons</b>	Kilogram.....	1,000
	Long Tons.....	0.98421
	Pounds.....	2,204.6
	Short Tons.....	1.10231